VLASYUK, P.A., otvetstvennyy red.; VASILENKO, A.A., red.; YUKHIMCHUK, F.F., kand.sel'skokhozyaystvennykh nauk, red.; ZELIGMAN, S.B., kand. tekhn.nauk, red.; KUKHARENKO, N.I., kand.biol.nauk, red.; MULYARSKIY, B.Ya., red.izd-va; SIVACHENKO, Ye.K., tekhn.red.

[Improving techniques of using fertilizers] Usovershenstvovanie tekhniki vnesenila udobrenii. Kiyev, 1955. 255 p. (MIRA 11:6)

1. Akademiya nauk URSR. Kiyev. Rada po vyvcheniyu produktivnykh sil URSR. 2. Deystvitel'nyy chlen Akademii nauk USSR i Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Vlasyuk) 3. Deystvitel'nyy chlen Akademii nauk USSR (for Vasilenko)
(Fertilizers and manures)

VLASYUK P.A.

Action of nuclear radiations on plants. P. A. Vlasyuk. *Sessiya Akad. Nauk S.S.S.R. po Mirnomu Ispol'zovaniyu Atomnoi Energii 1955, Zasedaniya Otdel. Biol. Nauk*, 127–47 (English summary, 147–8).—The use of Zn^{65}, Co^{60}, Ca^{45}, S^{35}, P^{32}, and C^{14} at the av. activity of 0.01–100 μc./kg. of seeds of various plants resulted in the following observations which supplement previous material which is reviewed. Ionizing radiations cause a 2-phase response in plants: the initial phase is that of suppression or of stimulation, the 2nd phase is that of normalization. Small doses of radioactive materials introduced into seeds of planting soil led to improved utilization of nutrients, accelerated metabolism, and increased crops; as such this can be recommended for agricultural use. Such mild treatment also acts as a form of buffer against harmful effects of large doses of radiation; this protective action is also shown by the SH compds. and ascorbic acid in the plant tissues. The effect of ionizing radiation on the plants is greatly affected by the nutritional state of the plants. Expts. were run with yeast, wheat, flax, and sugar beet, and numerous radiograms are shown.

G. M. Kosolapoff

Vlasyuk, P. A.

No 4,

The significance of different forms of phosphates in plant nutrition. P. A. Vlasyuk, E. S. Kosmatyi, and Z. M. Klimovitskaya (Inst. Plant and Agrochem., Acad. Sci. Ukr. S.S.R., Kiev). *Fiziol. Rastenii, Akad. Nauk S.S.S.R.* 2, 334–7(1955).—Expts. with N-P-K plant diet contg. P^{32} in superphosphate, Ca pyrophosphate, or Ca orthophosphate were performed on sugar beet, wheat, and clover. Sugar beet and clover utilize the P content of superphosphate most intensely, pyrophosphate is utilized less well, and orthophosphate the least. P, regardless of its source, is localized more in the constitutional proteins than in protein reserves (storage proteins). In sugar-beet leaf in the 16-day plants (initial vegetative period) there are formed, in addition to inorg. P, glycerophosphate, glucose-1-phosphate, and fructose-1,6-diphosphate. At this age the roots show a considerable concn. of the inorg. P only. The best intake of P from superphosphate into sugar beet occurs when the fertilizer is introduced into the rows at planting. If the superphosphate is introduced some 5 cm. below the seeds the intake of P is considerably reduced. The meristematic young tissues of plants are richer in P than are the older tissues.

G. M. Kosolapoff

CH

(2)

VLASYUK, P. A.

USSR.

Participation of microorganisms in plant nutrition. P. A. Vlasyuk and V. D. Manzon (Inst. Plant Physiol. and Agrochem., Acad. Sci. Ukr. S.S.R., Kiev). *Izvest. Akad. Nauk S.S.S.R., Ser. Biol.* 1955, No. 3, 49–53.—The use of S^{35} and P^{32} tracing by means of labeled phosphate and sulfate introduced into *Azotobacter* cultures, in connection with nutrition of corn and barley plants, conducted so that the sole source of labeled atoms was their contents in the bacterial bodies, showed that both live and dead bacterial material directly participate in plant nutrition. In sterile conditions P enters corn plants more readily from dead bacteria than from live ones; the same applies to barley. G. M. K.

Vlasyuk, P. A.

MD

The inactivation of urease by compounds of manganese as a preventative for the loss of urea nitrogen. P. A. Vlasyuk and A. V. Manorik. *Dopovidi Akad. Nauk Ukr. R.S.R.* No. 4, 364–7 (1955)(Russian summary).—Test materials were $MnSO_4$ and waste products of Mn mining. $MnSO_4$ was added at the rate of 0.25 (I) and 2.5 g./l. (II), and the waste material at the rate of 7.5 g./l. (III). Untreated urine was used as control (IV). Original urea-N content was 3.45 g.; 5 days after the addn. of the reagents urea N in IV was 1.20 and 10 days later, 0.90 g., or losses in N of 65.2 and 74.0%. In I the urea-N values were in 5 days 3.40 and in 10 days 3.38 g. or losses of 1.5 and 2.1%. In II urea N was in 5 days 3.39 and in 10 days 3.39 g. or a loss of 1.8 and 1.8%. In III urea N was in 5 days 3.42 and in 10 days 3.40 g. or a loss of 0.9 and 1.5%. B. S. Levine. (1)

Inst. Plant Physiology & Agrochem, AS Ukr SSR

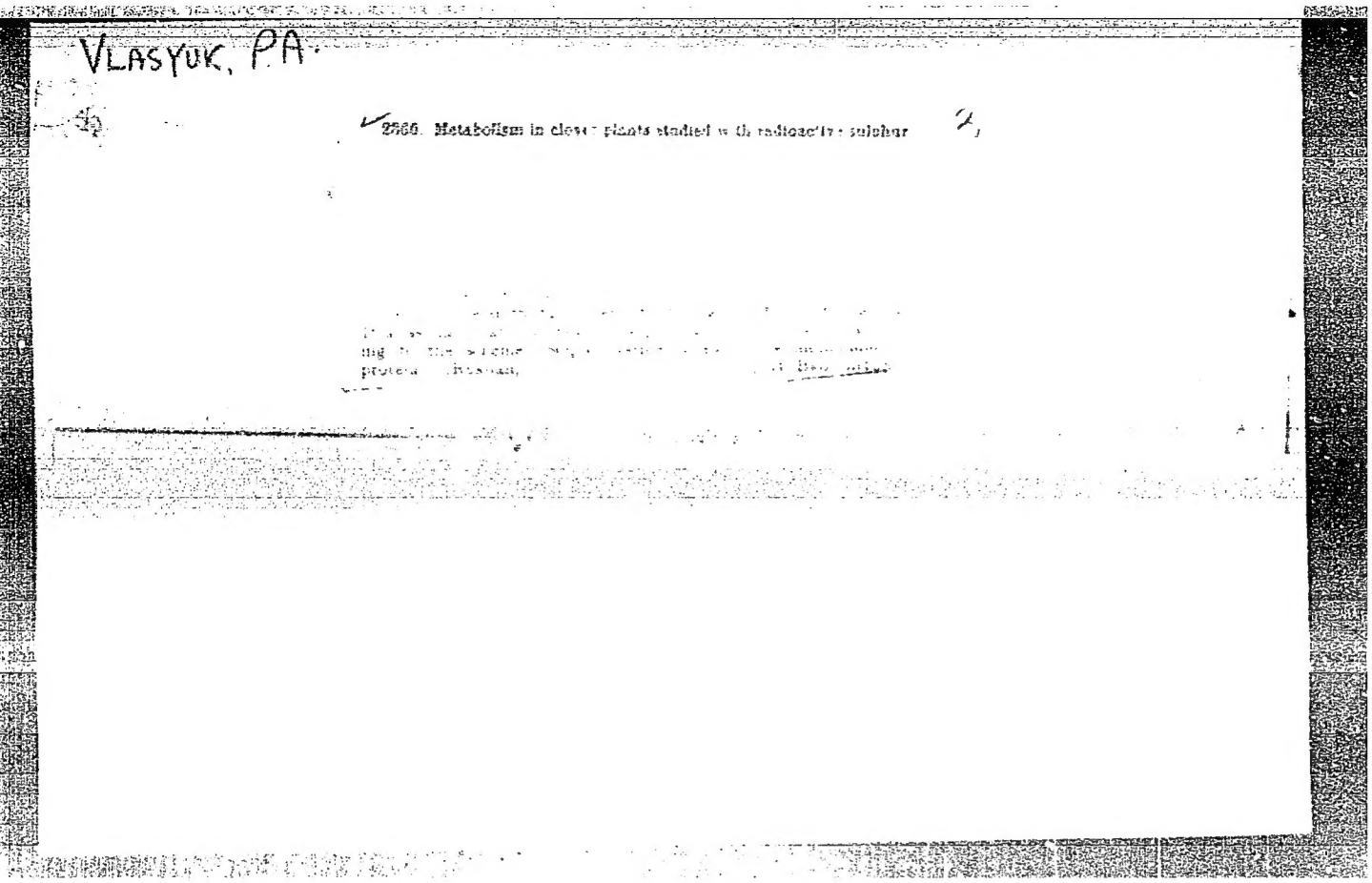
VLASYUK, P.A., MANORIK, A.V.

Increasing the biological activeness of the soil subjected to enriched composts. Dop. AN URSR no.5: 500-504 '55. (MLRA 9:3)

1. Diysniy chlen AN URSR (for Vlasyuk); 2. Institut fiziologii roslin ta agrokhimii AN URSR.
(Compost)

VLASYUK, P.A.

13544* Effect of Organo-Mineral Fertilizers on Increasing the Yield of Corn. Vliianie organo-mineral'nykh udobrenii na povyshenie urozhaia kukuruzy. (Russian.) P. A. Vlasiuk and P. Z. Lisoval. *Zemledelie*, v. 3, no. 7, July 1955, p. 47-51.
Effect of $N_{75}P_{45}K_{45}$, K_2SO_4, KCl, K-Mg, and Mn with or without compost. Tables.



VLASYUK, P.A.

2566. Metabolism in clover plants studied with radioactive sulphur

6957. Phosphorus metabolism in the sugar beet. P. A. Vlasiuk and F. S. Kosmatii ... *Ukrain. S.S.R.*, ... 1956 ...

15811 — In the ... [illegible]

VLASYUK, P.A.

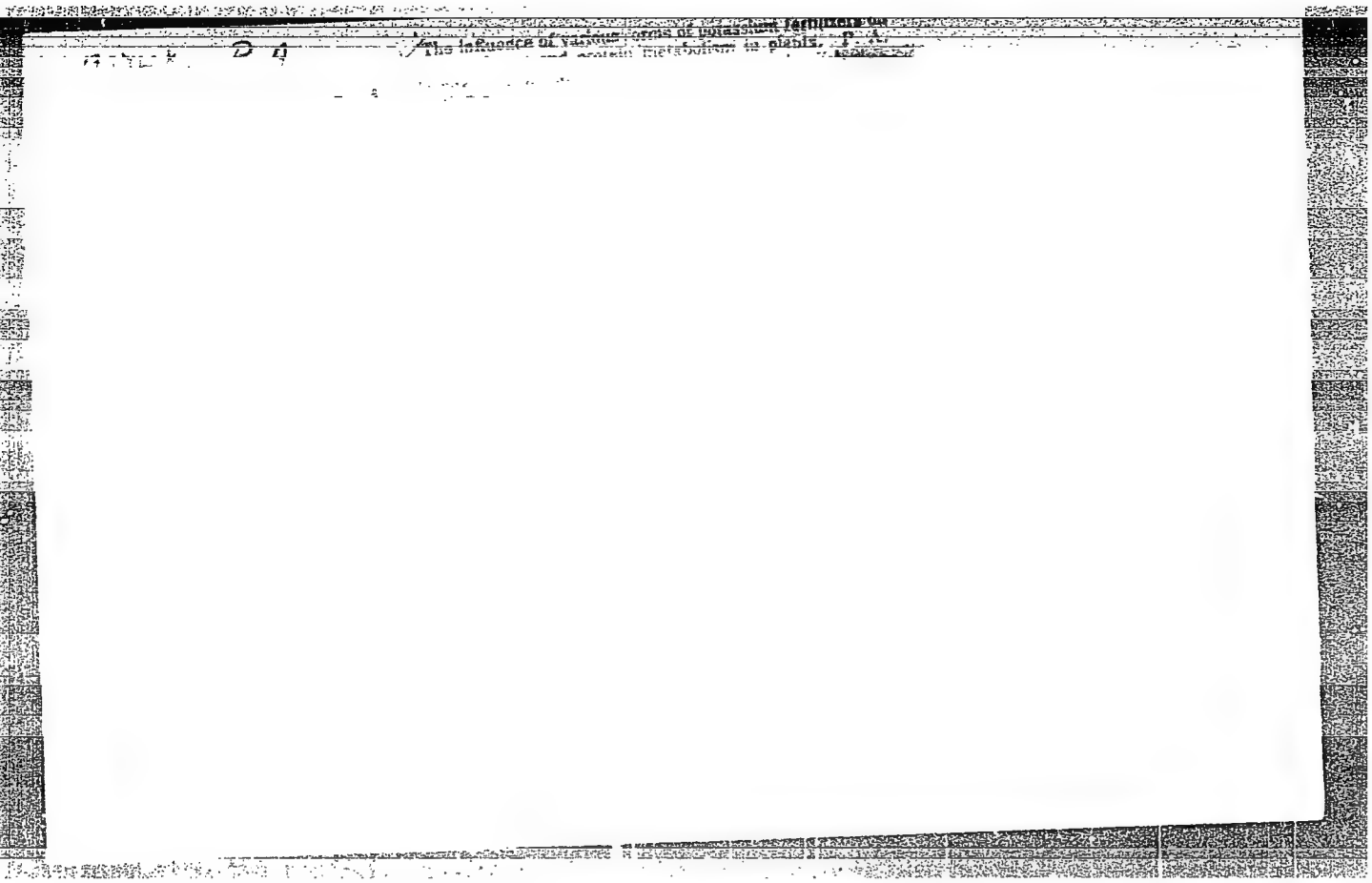
VLASYUK,P.A.; PORUTS'KIY,G.V.

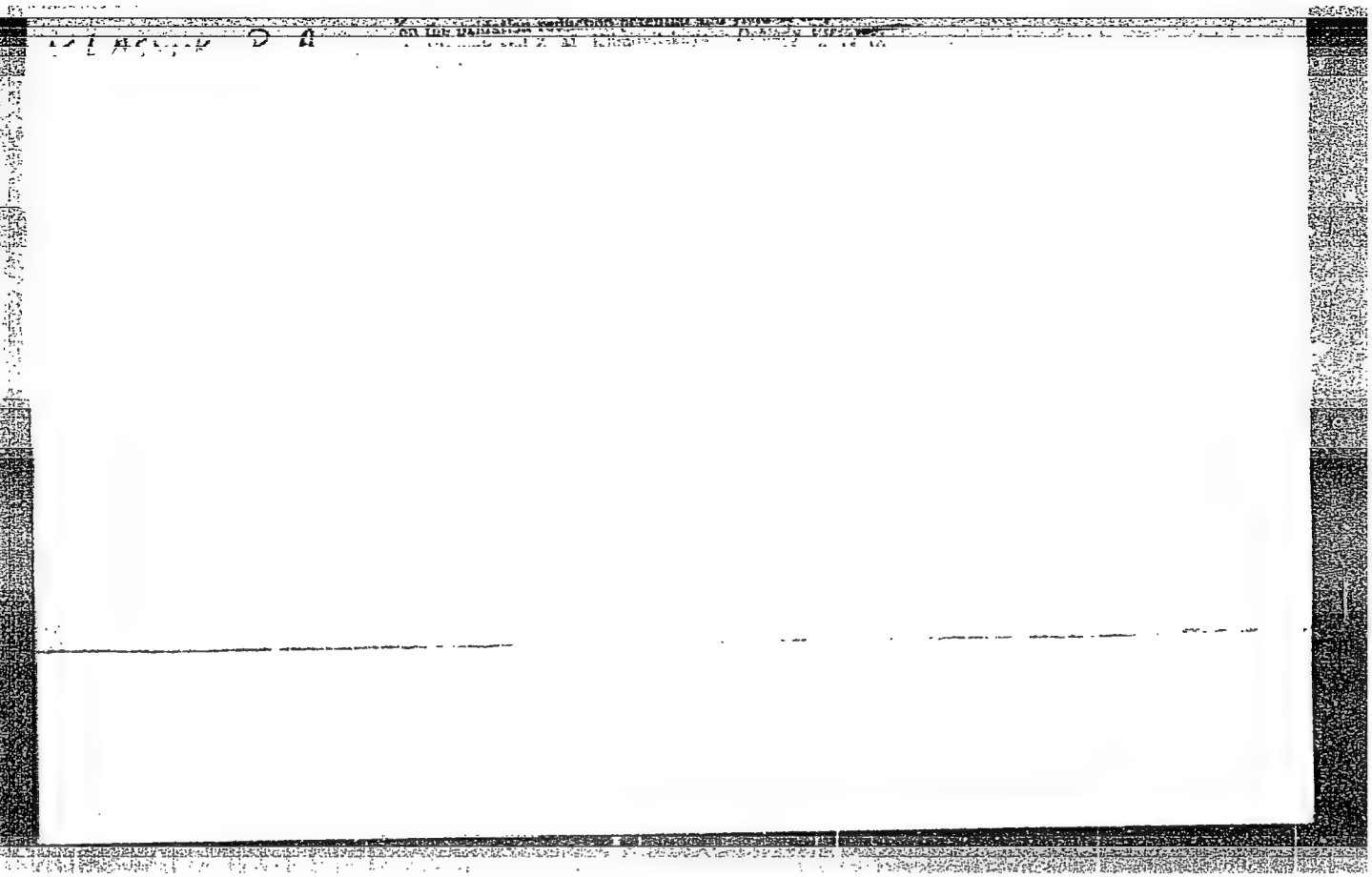
Phytohormones and the vitality of a plant organism. Bot.zhur. [Ukr.] 12 no.2:77-89 '55. (MLRA 8:10)
(Hormones (Plants))

VLASYUK, P.A.; LISOVAL, P.Z.; DOBROTVORS'KA, O.M.

Properties of organic and mineral composts and their effect on the yield of sugar beets. Mikrobiol. zhur. 17 no.4:15-21 '55
(MLRA 10:5)

1. Z Institutu fiziologii roslin ta agrokhimii AN URSR
(COMPOST) (SUGAR BEETS)





VLASYUK, P.A.

The influence of root and foliar feeding of radioactive phosphorus and calcium on the growth and sugar content of sugar beets. P. A. Vlasyuk, E. S. Kosmatyil, and Z. M. Klimovitskaya. *Doklady Vsesoyuz. Akad. Sel'skokhoz. Nauk im. V. I. Lenina* 20, No. 6, 15–17(1955).—Supplying to 10 kg. soil 5–10 microcuric of radioisotope Ca has increased the wt. of the root and leaves by 21% and the sugar content by 0.3–0.8%. Radiophosphorus (in the form of Na_2HPO_4) applied to the foliage has increased the wt. of roots by 41%. All through the growing period there was more Ca in the leaves than in the roots. J. S. Joffe

VLASYUK, P.A.

'813* Radioactive Isotopes and the Development of Plants. Radioaktivnye izotopy i razvitie rastenii. (Russian.) P. A. Vlasiuk. *Nauka i zhizn'*, v. 22, no. 10, Oct. 1955, p. 21-22.

Effect of treating lupine seeds with ionizing radiations of Zn, and of radioactive P isotopes on wheat seeds, etc.

Vlasyuk P.A.

VLASYUK, P.A.

Atomic energy in the service of agriculture. Visnyk AN URSR 26 no.9:35-41 S'55. (MLRA 8:11)

1. Diysniy chlen Akademii nauk URSR
(Radiobiology) (Agriculture)

VLASYUK, P.A.

I.V.Michurin's life and work; on the 100th anniversary of his birth.
Visnyk AN URSR 26 no.10:3-11 O '55. (MLRA 9:1)

1.Diysn.chlen Akademii nauk URSR i Vsesoyuznoy Akademii Sil'skogospodarchykh nauk imeni Lenina.
(Michurin, Ivan Vladimirovich, 1855-1935)

VLASYUK, P.A.

USSR/Biology - Plant physiology

Card 1/1 Pub. 22 - 51/53

Authors : Vlasyuk, P. A., Act. Memb. Acad. of Sc., Ukr. SSR.; and Grodzinskiy, D. M.

Title : Repeated utilization of phosphorus and sulfur by buckwheat

Periodical : Dok. AN SSSR 102/4, 845-847, Jun 1, 1955

Abstract : Biological data are presented on the re-utilization of P and S by buckwheat. Five references: 3 USSR and 2 USA (1932-1950). Tables.

Institution : Acad. of Sc., Ukr. SSR, Inst. of Plant Physiology and Agricultural Chem.

Submitted : January 8, 1955

VLASYUK, P.A.; GRODZINSKIY, D.M.

Tropisms of plant roots toward nuclear radiations. Dokl.AN SSSR 105 no.6:1358-1360 D '55. (MLRA 9:4)

1.Deystvitel'nyy chlen AN USSR (for Vlasyuk).2.Institut fiziologii rasteniy i agrokhimii Akademii nauk USSR.
(Roots (Botany)) (Plants, Effect of radiation on)

VLASYUK, P.A.

96. Book Published on Uses of Radioisotopes in Studies of Plant Nutrition

Mikroelementy i Radioaktivnye Izotopy v Pitanii Rasteniy (Microelements and Radioactive Isotopes in Plant Nutrition), by Academician Petr Antipovich Vlasyuk, Academy of Sciences Ukrainian SSR, Kiev, Publishing House of Academy of Sciences Ukrainian SSR, 1956, 116 pp

Recent advances in scientific research in the fields of study and use of the microelements and radioactive substances in agriculture are discussed.

The chapter headings and pagination are as follows: foreword (3-4); improving conditions of plant nutrition by manganese fertilizers (5-21); superphosphate containing manganese -- a new type of fertilizer (22-26); significance of manganese microelement in increasing plant viability (27-38); selective biological properties of plants in relation to ultramicroelements (39-51); content of mobile forms of zinc, boron, cobalt, and copper microelements in soils of the Ukrainian SSR (52-59); use of tracer atoms for establishing methods for improving plant nutrition (60-75); effect of nuclear radiation on plants (76-90); effect of small doses of ionizing radiation from radioactive isotopes of zinc and cobalt on plants (91-104); and conclucion (105-114). (U)

ZINOV'YEVA, Khristina Gavrilovna; VLASYUK, P.A., akademik, red.; IGNATENKO, A.I., red.; KVITKA, S.P., tekhn. red.

[Azotobacter and farm plants] Azotobakter i sel'skokhoziaistvennye rasteniia. Kiev, Gos.izd-vo sel'khoz.lit-ry, USSR, 1962. 178 p. (MIRA 16:3)

(Azotobacter) (Field crops)

VLASYUK, Petr Antipovich

[Principles of agriculture] Oznovy sil'skdgo hospodarstva. Kyiv, Radians'ka shkola, 1956. 532 p. (MIRA 10:11)
(Ukraine--Agriculture)

VLASYUK, P.A.

[Ways of using radioactive isotopes in agriculture] Shliakhy zastosuvannia radioaktyvnykh izotopiv u sil's'komu hospodarstvi. Kyiv, 1956. 59 p. (MLRA 10:4)
(Radioisotopes) (Agriculture)

SPIVAK, M.S., glavnyy redaktor; BELOZUB, V.G., redaktor; VASILENKO, P.M., redaktor; ZORIN, I.G., redaktor; IL'CHENKO, I.K., redaktor; KOVAL', A.G., redaktor; KRYLOV, A.F., redaktor; PUKHAL'SKIY, A.V., redaktor; SIDORENKO, A.P., redaktor; FEDCHENKO, A.N., redaktor; ANGELINA, P.N., redaktor; BUZANOV, I.F., redaktor; BOYKO, D.V., redaktor; BURKATSKAYA, G.Ye., redaktor; VASILENKO, A.A., redaktor; VLASYUK, P.A., redaktor; GORODNIY, N.G., redaktor; DEMIDENKO, T.T., redaktor; DUBKOVETSKIY, F.I., redaktor; KIRICHENKO, F.G., redaktor; LITOVCHENKO, G.P., redaktor; OZERNYY, M.Ye., redaktor; PERSHIN, P.N., redaktor; POPOV, F.A., redaktor; POSMITNYY, M.A., redaktor; PSHENICHNYY, P.D., redaktor; RADCHENKO, B.P., redaktor; ROMANENKO, I.N., redaktor; RUBIN, S.S., redaktor; SAVCHENKO, M.Kh., redaktor; SOKOLOVSKIY, A.N., redaktor; TSYBENKO, K.Ye., redaktor; KOVAL'SKIY, V.F., tekhnicheskiy redaktor

[Practical collective farm encyclopedia] Kolkhoznaia proizvodstvennaia entsiklopediia. Izd.2-oe, ispr. i dop. Kiev, Gos.izd-vo sel'khoz. lit-ry USSR. Vol.1. Abrikos - liutserna. 1956. 688 p. (MLRA 10:9)
(Agriculture--Dictionaries)

SPIVAK, M.S., golovnyy redaktor; BILOZUB, V.G., redaktor; VASILENKO, P.M., redaktor; ZORIN, I.G., redaktor; IL'CHENKO, I.K., redaktor; KOVAL', O.G., redaktor; KRILOV, O.F., redaktor; PUKHAL'S'KIY, A.V., redaktor; SIDORENKO, O.P., redaktor; FEDCHENKO, O.N., redaktor; ANGELINA, P.M., redaktor; BUZANOV, I.F., redaktor; BOYKO, D.V., redaktor; BURKATS'KA, G.E., redaktor; VASILENKO, A.O., redaktor; VLASYUK, P.A., redaktor; GORODNIY, M.G., redaktor; DEMIDENKO, T.T., redaktor; DUBKOVETS'KIY, F.I., redaktor; KIRICHENKO, F.G., redaktor; LITOVCHENKO, G.P., redaktor; OZERNIY, M.O., redaktor; PERSHIN,P.M., redaktor; POPOV, F.A., redaktor; POSMITNIY, M.O., redaktor; PSHENICHNIY, P.D., redaktor; RADCHENKO, B.P., redaktor; POMANENKO, S.S., redaktor; RUBIN, S.S., redaktor; SAVCHENKO, M.Kh., redaktor; SOKOLOVS'KIY, O.N., redaktor; TSIBENKO, K.O., redaktor; SHCHERBINA, O.P., redaktor; KRAVCHENKO, M.F., tekhnichniy redaktor

[Collective farm encyclopedia] Kolhospna vyrobnycha ensyklopediia. Vyd. 2-e, perer. i dop. Kyiv, Derzh.vyd-vo sil's'kohospodars'koi lit-ry URSR. Vol.1. Abrykos - Liutserna. 1956. 756 p. (MIRA 9:9)
(Agriculture--Encyclopedias and dictionaries)

USSR/Cultivated Plants. Cereals. M

Abs Jour: Ref Zhur-Biol., No 17, 1958, 77625.

Author : Vlasyuk P. A.; Lisoval, P.Z.
Inst : AS UKrSSR.
Title : Influence of Organic-Mineral Fertilizers on Harvests of Corn.

Orig Pub: V sb.: Vopr. razvitiya s.-kh. Poles'ya. Kiev, AN USSR, 1956 (1957), 40-49.

Abstract: In the Institute of Physiology of Plants and Agrotechny AS UkrSSR in 1953-1954, the influence was studied of different types of fertilizers on harvests of corn, placed in crop-rotation after winter wheat. On meadow-chernozem soils, organic-mineral fertilizers contributed to the increase of the grain harvest of corn by

Card : 1/3

USSR/Cultivated Plants. Cereals. M

Abs Jour: Ref Zhur-Biol., No 17, 1958, 77625.

14.1-15.7 c/ha with harvests in the control (without fertilizer) 39.1 c/ha. Application of 5 t/ha of organic-mineral composts in a nest with sowing proved the most effective and assured on weakly-podzolic, sandy soils the obtaining of a grain harvest of corn of 81.6 c/ha with harvest in the control 39 c/ha. On weakly podzolic, lightly sandy soils the application of 5 t/ha of humus in the nest with sowing assured the addition of harvest of 7 c/ha with harvest in control 42.1 c/ha. With an organic-mineral mixture with the same control/grain-harvest increase of 24 c/ha was obtained. Tillage of green mass of harvested lupine with combined

Card : 2/3

USSR/Cultivated Plants. Cereals. M

Abs Jour: Ref Zhur-Biol., No 17, 1958, 77625.

application of 3 t/ha of organic-mineral mixture in a nest on weakly podzolic sandy soil gave a harvest of green mass of corn of the Odessa 10 variety in 1954 of 1087 c/ha. -- N. P. Fedorova.

Card : 3/3

USSR/Soil Science. Organic Fertilizers. J-4

Abs Jour: Ref Zhur-Biol., No 6, 1958, 24759.

Author : Vlasyuk, P.A.; Manorik, A.V.
Inst :
Title : Utilization of Enriched Composts for Increasing Harvests of Agricultural Crops.

Orig Pub: V sb.: Vopr. razvitiya s. kh. Poles'ya Kiyev, AN USSR, 1956 (1957), 73-80.

Abstract: The Institute of Plant Physiology andAgricultural Chemistry AN USSR utilized wasts of the brown coal industry for making composts with manure; content 0.53% N, 0.63% P, and 0.39 K_2O. In experiments for 6 mos. of 1951-1952 with storing of manure without the wastes of brown coal industry, the average

Card : 1/2

Abs Jour; Ref Zhur-Biol., No 6, 1968, 24759.

losses of N constituted 13%, while, when compost was made with the wastes, the average content of N increased by 16.5%. The content of hydrolyzed N and of fixed ammonium was considerably increased by activity of compost. In the 1954 experiments on the application of P^{32}, it was found that phosphorus from phosphorites turns to forms utilizable by plants. The increase of the sugar beet harvest due to the making a compost of manure with mineral fertilizers and brown coal constituted 69 c/ha., with a yield of 339 c/ha without addition of brown coal in the compost. Making a compost of manure with wastes of the brown coal industry jointly with phosphorus fertilizers and wastes of the manganese-ore industry proved most effective.

VLASYUK, P.A.; MANORIK, A.V.

Increasing peat efficiency by strengthening its biological activity. Dop.AN URSR no.1:79-84 '56. (MIRA 9:7)

1.Diysniy chlen AN URSR i VASGNIL (for Vlasyuk).2.Institut fiziologii roslin ta agrokhimii AN URSR.
(Peat)

VLASYUK, P.A.

USSR/Soil Science - Physical and Chemical Properties of Soils. J-2

Abs Jour : Ref Zhur - Biol., No 2, 1958, 5767

Author : Vlasyuk, P.A.

Inst : Academy of Sciences LatvSSR

Title : The Content of Extractable Forms of Zinc, Boron, Cobalt, and Copper in the Soils of the Ukrainian SSR.

Orig Pub : Mikroelementy v s. kh. i meditsine, Riga, Akad Nauk Latv-SSR, 1956, 97-103

Abstract : The microelement content of the turf-podzolic soils, gray forest soils, chernozems, solonetz and solonchak soils of Poles'ye, the right- and left-bank soils of the (Lesostep') Wooded Steppe, the southern steppe regions and the Trans-Carpathian region of the UkSSR is examined. The content of extractable zinc in the soils reflects its content in the soil-forming plants, while its distribution in the soil

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Abs Jour : Ref Zhur - Biol., No 2, 1958, 5767

is found mainly in the horizons below the tillable level, while with the chernozems it is found in the tillable horizon. In the turf-podzolic and gray forest soils there is 0.23-0.43 mg. of Co per kilogram of soil (dry weight). In some gray forest soils and podzolized chernozems the Co content reaches 0.6 mg., and in the meadow-chernozem cultivated soils it reaches 2.3 mg. Most of the soil variations in the UkSSR, with the exception of the peat and turf-podzolic soils, are fully supplied with Cu. The turf-carbonate and mountain meadow soils of Trans-Carpathia, and also the solonetz soils, contain especially large quantities of it; the chernozems and dark chestnut soils contain less, while the gray forest soils and turf-podzolic soils contain the lowest amounts. The Cu is most extractable in all types of soil where the mechanical composition is light, less so in heavy argillaceous soils, and least of all in peat soils.

USSR / Soil Science. Mineral Fertilizers. J-4

Abs Jour: Ref Zhur-Biol., No 8, 1958, 34425.

Author : Vlasyuk, P. A.
Inst : AS LatvSSR - Institute of Physiology of Plants and Agrochemistry of AS UkrSSR.
Title : Improvement of Conditions of Nutrition of Plants by Means of Manganic Trace Fertilizers.

Orig Pub: V sb.: mikroelementy v s.kh. i meditsine, Riga, AN LatvSSR, 1956, 111-124.

Abstract: According to numerous laboratory tests and field experiments, the positive action of Mn on respiration, photosynthesis, activity of ferments, content of chlorophyll, etc., has been shown; in this connection, a considerable increase in yield and quality has been obtained in the following plants: sugar beets, winter wheat, corn, oats,

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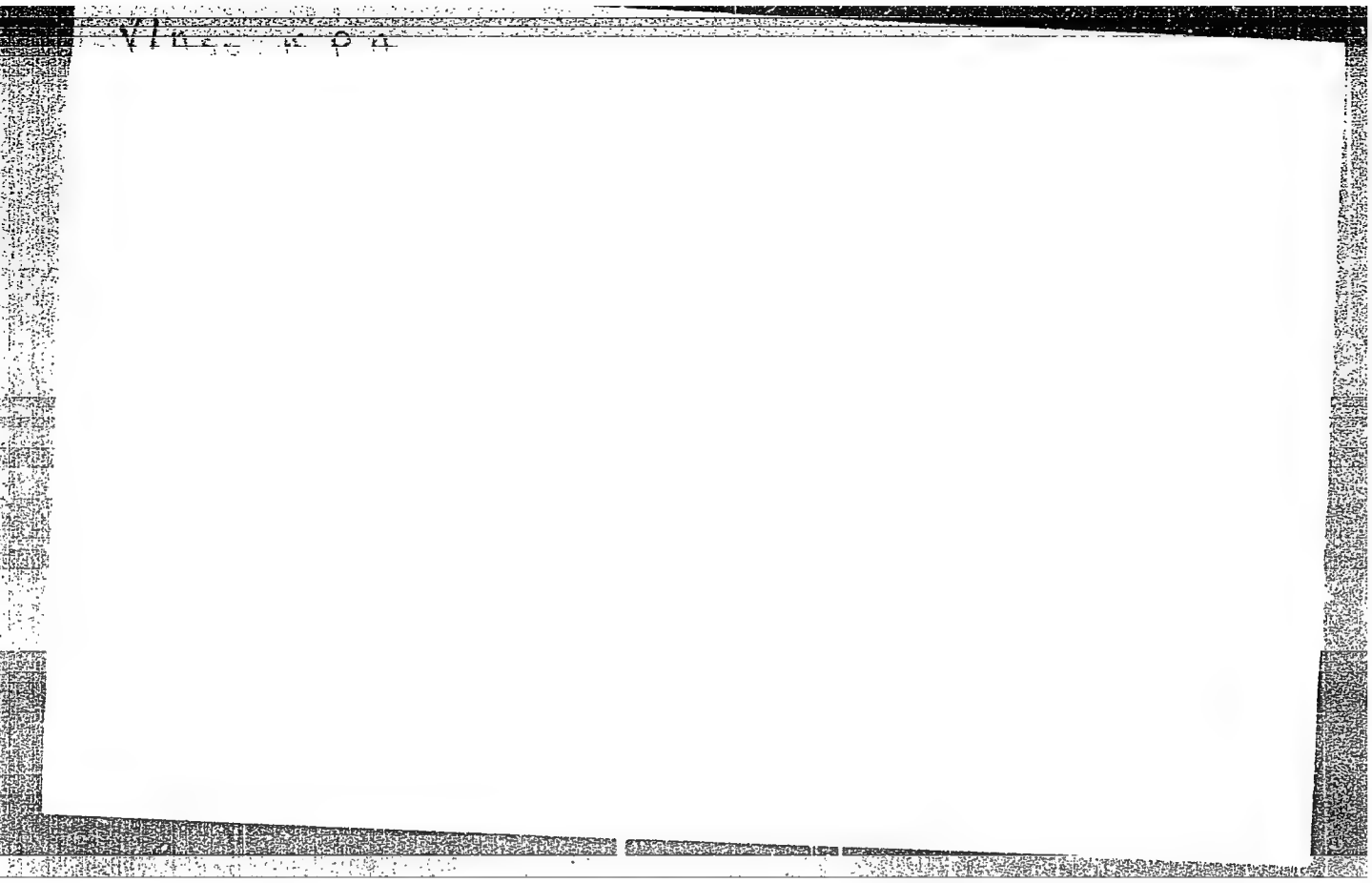
USSR / Soil Science. Mineral Fertilizers. J-4

Abs Jour: Ref Zhur-Biol., No 8, 1958, 34426.

Abstract: buckwheat, millet, tobacco, potatoes, cucumbers, tomatoes, cabbage, eggplant, hemp, flax, garden strawberry and strawberry. Increase of the action of nitrification and ammonification by bacteria in the soil, as well as the inactivation of the ferment of urease in the liquid manure, has been established; in this connection, the decomposition of the urea is removed, and losses of N are sharply lowered. The yield of agricultural plants is particularly well affected by manganized P_s and by manganic slag. The task has been accomplished in the Institute of Physiology of Plants and Agrochemistry of the Academy of Sciences UkrSSR. -- A. P. Shchorbakov.

Card 2/2



VLASYUK, P.A.

A S Ukr SSR

Polar differentiation and alteration of stage readiness of plants for flowering. P. A. Vlasyuk and G. V. Porutskii (Plant Physiol. Agrochem. Inst., Kiev). *Invest. Akad. Nauk S.S.S.R., Ser. Biol.* 1956, No. 1, 84–96.—The studies with cotton plants (high-Mn requirement) and corn (low-Mn requirement) were made in respect to content of dry matter and H_2O content in the progressive segments of the growing plants at various stages. Vernalization temp. limits reach 0° for cotton and 40° for corn. Vernalizing activity of $MnSO_4$ is more pronounced in cotton than in corn. Mn supply tends to increase the height periodicity of the content of dry matter and polarity in cotton, while the vernalization temp. is more important for corn. The polar periodicity of distribution of matter in the stems can be used as an index of the plant's readiness for flowering. G. M. Kosolapoff

MD

(1)

Vlasyuk, P. A.

USSR/Genral Division - General Problems. Philosophy. Methodology. A-1

Abs Jour : Ref Zhur - Biologiya, No 7, 10 April 1957, 25639

Author : Vlasyuk, P.A.
Inst : Academy of Sciences UkSSR: Inst. of Agric. Biology; Inst. of Plant Physiology and Agric. Chemistry; Inst. of Entomology and Phytopathology.
Title : Increasing the Role of Agricultural Science in the Development of Agriculture in the Ukraine.

Orig Pub : Visnik AN URSR, 1956, No 2, 27-38

Abst : The Academy of Sciences UkSSR is studying a number of important problems connected with increasing crop yields and improving productivity in animal farming in the light of the directives of the XXth Congress of the CP USSR. The Institute of Plant Physiology and Agricultural Chemistry has developed a number of new fertilizing techniques applicable to various areas of the Ukraine and variety of

Card 1/2

Abs Jour : Ref Zhur - Biologiya, No 7, 10 April 1957, 25639

crops. 1955 marked the beginning of studies in the USSR of a new type of fertilizer: manganated granular superphosphate, which increases potato yield by 24 cent/hect, sugar beet yield by 20 cent/hect, corn yield by 6 cent/hect, etc. The Institute of Entomology and Phytopathology is developing and putting into use new techniques in fighting pests and weeds. The Institute of Agricultural Biology is engaged in developing new crops. Soil scientists are working on problems of agricultural technique and fertilizers. Extensive use is being made of tracer element techniques. Ukrainian scientists have assumed the responsibility of pursuing further the theoretical problems connected with the use of atomic energy in farming.

Vlasyuk, P.A.

USSR/Microbiology. Soil Microbiology F-3

Abs Jour : Ref Zhur-Biologiya, No 1, 1957, 576

Author : P. A. Vlasyuk and V. D. Manzov
Inst :
Title : On the Application of Azotobacter for the Enrichment of Composts with Atmospheric Nitrogen

Orig Pub : Agrobiologiya, 1956, No 2, 89-97

Abstract : It was established that azotobacter when introduced into composts (with phosphorite flour) of manure and straw, and into composts made of peat became well adjusted, absorbed nitrogen from the atmosphere, and enriched with it the medium. In the presence of azotobacter losses of nitrogen from the composts of

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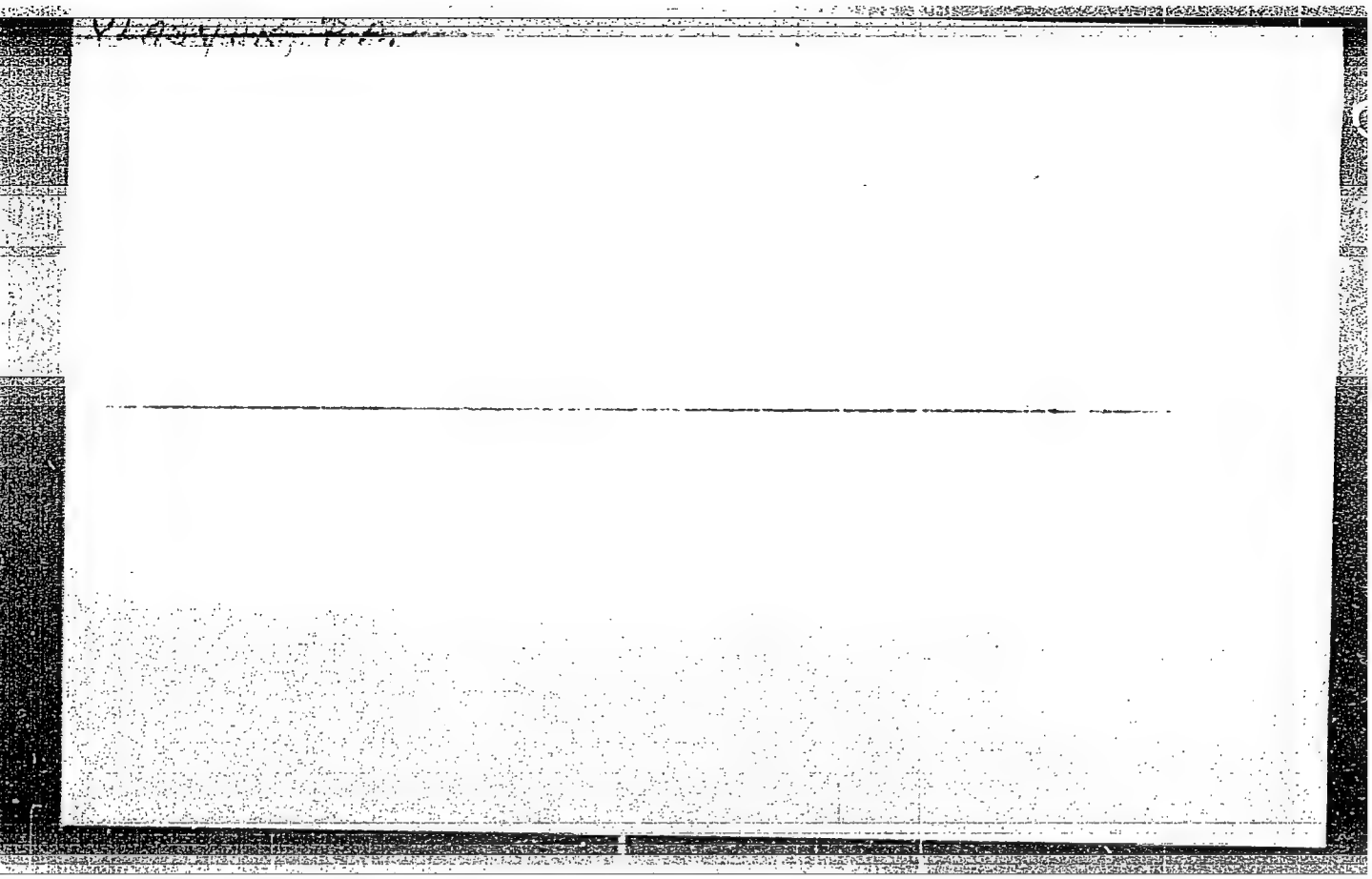
USSR/Microbiology. Soil Microbiology F-3

Abs Jour : Ref Zhur-Biologiya, No 1, 1957, 576

Abstract : manure dropped from 37.8 to 18.9%, and in composts from straw from 28.2 to 11.3%. In peat composts the nitrogen content as compared with the original increased from 3.2 to 10.7%, depending on the composition of the composts. On the introduction of the composts infiltrated with azotobacter into the soil, the number of azotobacter in the soil increased and displayed great activity.

Card 2/2



USSR/Cultivated Plants - Grains. H-4

Abs Jour : Ref Zhur - Biol., No 9, 1958, 39235

Author : Vlasyuk, P.A., Poruts'kiy, G.V.

Inst : AS UkrainianSSR.

Title : The Importance of Manganese Nutrient for Corn Growing in the Polos'ye Rayons of the UkrainianSSR.

Orig Pub : Nauk. pratsi vid. sil's'kogosp. nauk. AN URSR, 1956, vyp. 4, 4-15.

Abstract : Pre-sowing treatment of corn seeds with warm solutions of Mn salts considerably increases the vitality, yield and productivity of the plants. It contributes to the strengthening of the plant's metabolism and accelerates the passage through the initial stages of growth and development of the organism of the plant. -- Yu.P. Savelenko.

Card 1/1

VLASYUK, P.A., akademik.

Effectiveness of organomineral mixtures. Zemledelie 4 no.8:65-72 Ag '56. (MLRA 10:1)

1. Institut fiziologii rasteniy Ukrainskoy SSR.
(Ukraine--Fertilizers and manures)

USSR/Cultivated Plants - Potatoes. Vegetables. Melons. M-3

Abs Jour : Ref Zhur - Biol., No 7, 1958, 29794

Author : Vlasyuk, P.A., Dolya, V.S.

Inst : Institute for Plant Physiology and Agrochemistry of the Academy of Sciences, Ukrainian SSR.

Title : The Effect of Micronutrients and Bacterial Fertilizers on the Output of Vegetable Pot Cultures.

Orig Pub : Dopovidi AN URSR, 1956, No 6, 584-587 (ukr.; rez. russk.)

Abstract : It has been established as a result of experiments made by the Institute for Plant Physiology and Agrochemistry of the Academy of Sciences Ukrainian SSR in 1954-1955 that the application of micronutrients and phosphorus bacteria during the sprouting period considerably increases the growth of the vegetable cultures, shortens the budding time, that of flowering, of fruit ripening and

Card 1/2

Abs Jour : Ref Zhur - Biol., No 7, 1958, 29794

of cabbage head setting. The largest increase to the tomato yield was observed when phosphorus bacteria and manganese micronutrients were applied. Mn (the yield increased by 59 centners per ha.), Co (by 32 centners per ha.) and Zn (by 21 centners per ha.) proved most effective when raising cabbage sprouts in peat-compost pots.

USSR/Soil Science. Mineral Fertilizers. J-3

Abs Jour: Ref Zhur-Biol., No 6, 1958, 24746.

Author : Vlasyuk, P.A.; Lisovaya, P.Z.
Inst :
Title : Application of Kaluszite for Clover and Sugar Beet.

Orig Pub: Udobreniye i urozhay, 1956, No 11, 46-49.

Abstract: In the Institute of Physiology of Plants and Agricultural Chemistry ofthe AN USSR, in vegetating experiments on meadow-chernozem podsolic soil with red clover in its second year, the best results were given by: potassium sulfate, a mixture of it with potassium chloride and kaluszite. Increases of the yields comprised respectively 110; 88 and 77% in comparison with the baseline contained 16.0% K_2O; 5.5% MgO and 5.0% Cl. In the experiments with the

Card : 1/2

USSR/Soil Science. Mineral Fertilizers.

Abs Jour: Ref Zhur-Biol., No 6, 1958, 24746,

J-3

sugar beet, potash magnesia gave an increase of 16%, while kaluszite - 144%.

Card : 2/2

VLASYUK, P.A.

UKRAINE/Cultivated Plants - General Problems.

L-1

Abs Jour : Ref Zhur - Biologiya, No 16, 25 Aug 1957, 69179

Author : Vlasyuk, P.A.
Inst :
Title : Basic Methods of Increasing Soil Fertility.

Orig Pub : Visnik AN URSR, 1956, No 12, 16-24

Abstract : Some measures of increasing soil fertility in the steppe forestry zone of Ukrainian SSR are indicated (introduction of fieldgrass rotation and use of fertilizers).

Card 1/1

USSR/Plant Physiology - General Problems.

Abs Jour : Ref Zhur - Biol., No 18, 1958, 81966

I.

to the different duration of development stages (vernalization, luminous). The advent of stage readiness in the plants which were studied changed under the influence of various conditions of growth (temperature, food regimen). This reflected itself in their polarity. According to the authors, the polar and layer differentiation of the examined biochemical and physiological indexes can serve as a criterion of the stage readiness of plants and of the intensity of blossoming processes.
Bibliography, 43 titles. -- G.V. Porutskiy

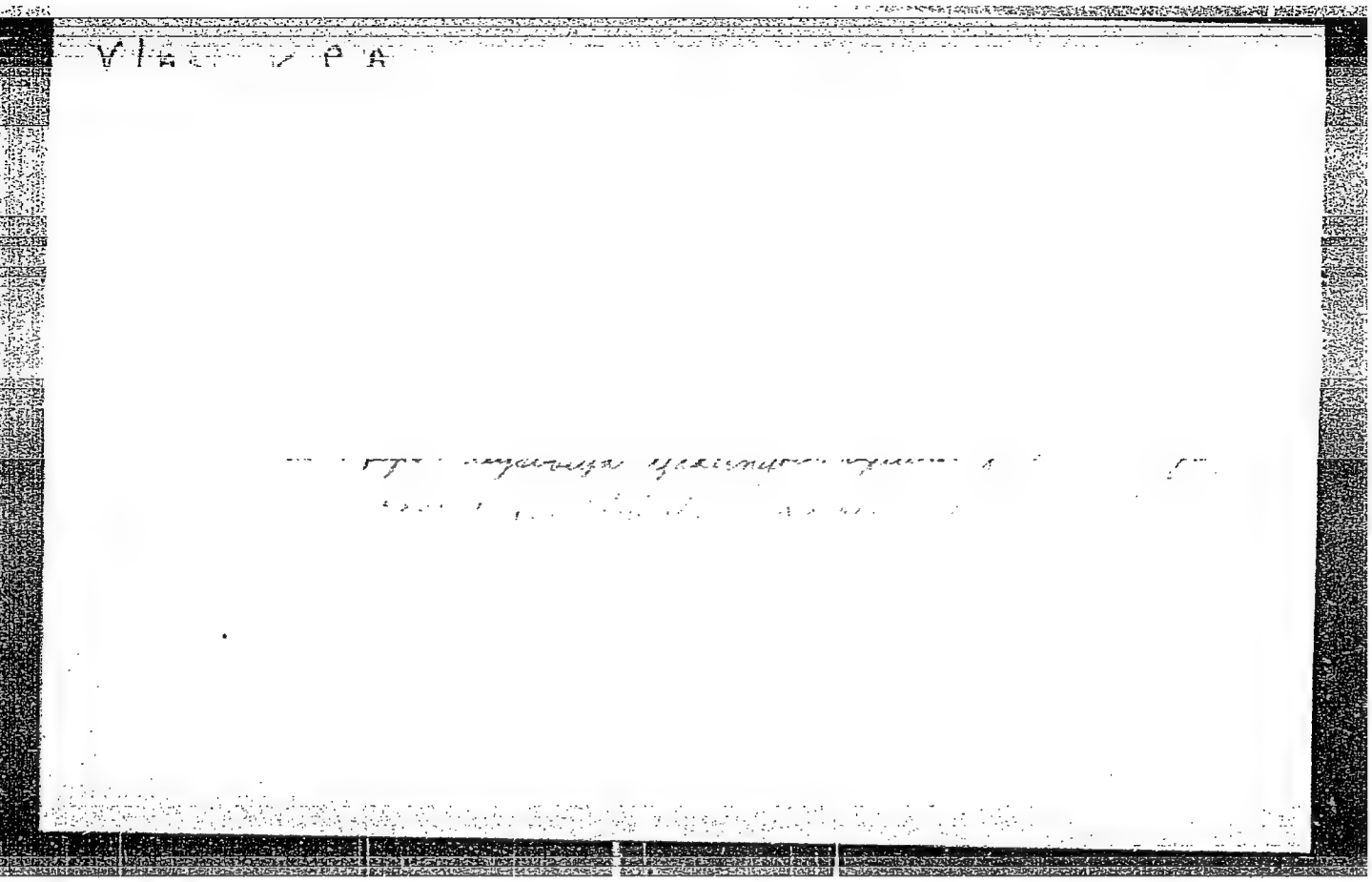
Card 2/2

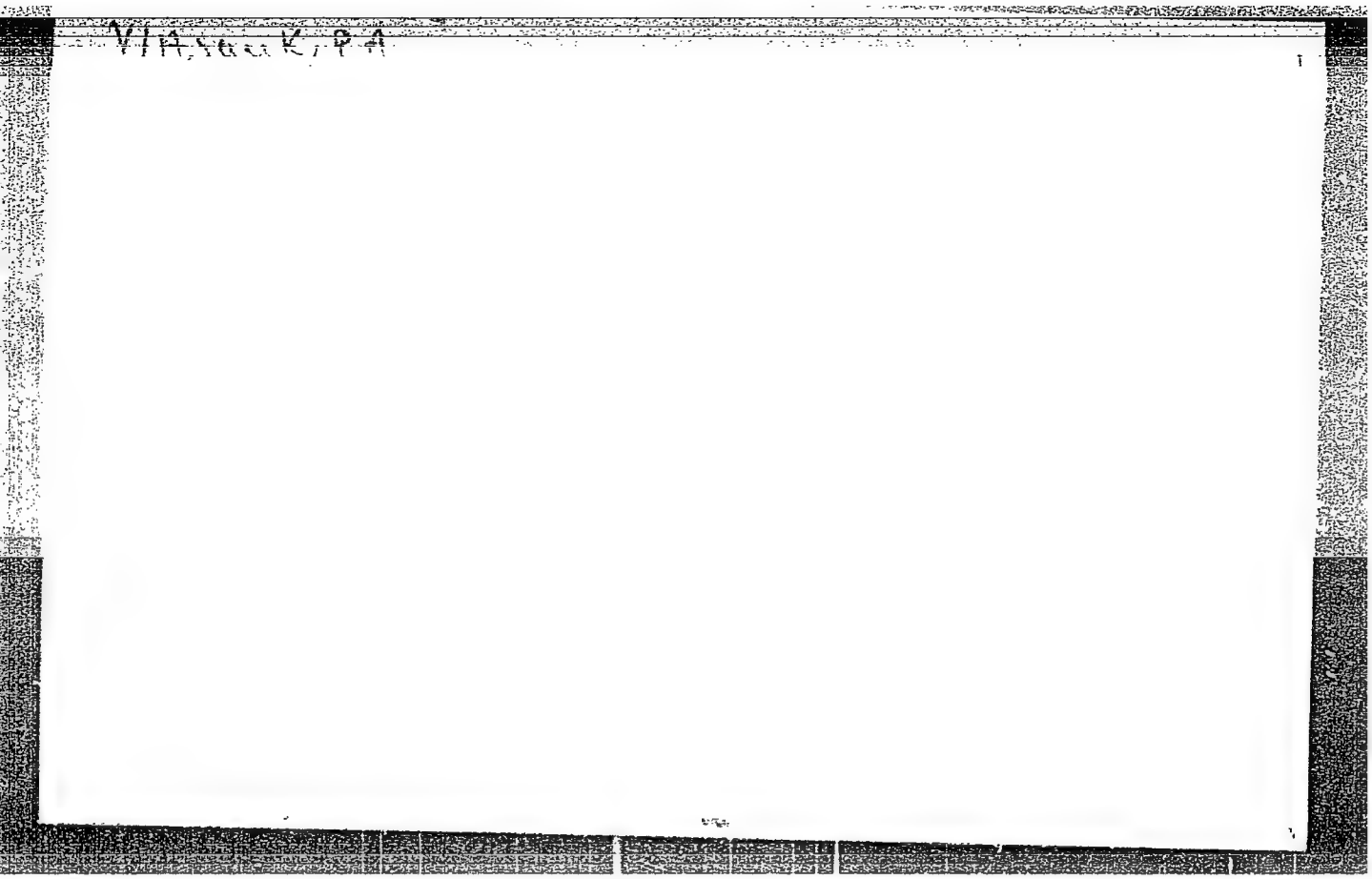
VLASYUK, P.A.; PORUTSKIY, G.V.

On the results of the discussion on phytohormones. Ukr.bot.zhur.13 no.4:100-102 '56. (MLRA 10:1)
(Growth promoting hormones)

VLASYUK, P.A.

Michurin's followers in the Ukraine. Nauk. zap. Kyiv. un. 15 no.11:31-34 '56. (MIRA 11:5)
(Ukraine--Agriculture)





Effects of organic-inorganic fertilizers on microbiological processes in the soil. P. A. Vlasyuk, K. M. Dobrotvorskaya, and R. N. Oleinik (State Univ., Kiev). *Mikrobiologiya* 25, 293–8 (1956).—Manure at 20 tons/ha. activated cellulosic aerobes and N-fixing and nitrifying anaerobes in winter wheat land more strongly than did a peat-compost blend at 3 tons/ha., even when reinforced with superphosphate (1.5 cwt) and lime (3 cwt). The intensification of ammonification, nitrification, and urea formation was also greater, so was the rise in wheat yield. Julian P. Smith

VLASYUK, P. A

8146

ON THE EFFECT OF NUCLEAR RADIATION OF PLANTS. P. A. Vlasyuk and D. M. Grodzinskii (Inst. of Plant Physiology and Agrochemistry). Doklady Akad. Nauk S.S.S.R. 106, 562-4(1956) Jan. 21. (In Russian)

Studies of radioactive isotope effects on plants revealed many complicated and varying reactions produced by ionizing radiation. In some cases the same dose showed contrasting effects or no effects at all, depending on the temperature, nutrition level, or other external conditions. As a rule, the positive effects were produced by the small doses. Ionizing radiation produced two-phase reactions; small radiation doses intensified the physiological functions of the plant; the large doses slowed down and weakened the life functions of the cells and tissues, which eventually became restored to normal activity. Such two-phase reactions were observed in the study of Ca^{45} and P^{32} radiation on Saccharomyces cerevisiae. A similar parabiotic reaction was observed in Uromyces onobrychidis. A diagram is presented showing the effects of ionizing radioactive isotope Ca^{45} on the breathing functions of Saccharomyces cerevisiae culture (in % to the breathing intensity in stable isotope media). Experiments were carried out on sugar beet leaves and oat seeds. On the basis of the studies it may be concluded that the effects of ionizing radiation are determined by the functional conditions of the growing organism or by some of its separate organs. It is also possible that the radiation affects plants as background excitation. (R.V.J.)

2

Mak

VLASYUK, P. A.

8147

EFFECTS OF SMALL DOSES OF IONIZING RADIATIONS ON OXIDATION-REDUCTION PROCESSES IN PLANTS. P. A. Vlasyuk, Z. M. Klimovitskaya, and E. S. Kosmatii (Ukraine Inst. of Plant Physiology and Agrochemistry). Doklady Akad. Nauk S.S.S.R. 106, 731-4(1956) Feb. 1. (In Russian)

Tracer studies of radioactive Ca^{45} (5 to 10 μc per plant) effect on sugar beet yield and the effects of small doses of P^{32}, Ca^{45}, and S^{35} in the food supply of sugar beets and clover are tabulated and discussed. The studies established that in the early stages of growth of sugar beets the ionizing radiation increased the oxidation and lowered the reduction processes. Considerable increase of reduction processes over the oxidation which resulted in richer sugar beet yield were observed towards the end of the vegetative period.

Larger ionizing radiation doses in clover plants increased oxidation and suppressed the reduction process. In clover plants small doses of radioactive S^{35} have intensified the oxidation, the tissue iodo-reducing properties, and the content of reducing forms of ascorbic acid. (R.V.J.)

SPIVAK, M.S., glavnyy red.; BELOZUB, V.G., red.; VASILENKO, P.M., red.; ZORIN, I.G., red.; IL'CHENKO, I.K., red.; KOVAL', A.G., red.; KRYLOV, A.F., red.; PUKHAL'SKIY, A.V., red.; SIDORENKO, A.P., red.; FEDCHENKO, A.N., red.; ANGELINA, P.N., red.; BUZANOV, I.F., red.; BOYKO, D.V., red.; BURKATSKAYA, G.Ye., red.; VASILENKO, A.A., red.; VLASYUK, P.A., red.; GORODNIY, N.G., red.; DEMIDENKO, T.T., red.; DUBKOVETSKIY, F.I., red.; KIRICHENKO, F.G., red.; LITOVCHENKO, G.P., red.; OZERNYY, M.Ye., red.; PERSHIN, P.N., red.; POPOV, F.A., red.; POSMITNYY, M.A., red.; PSHENICHNYY, P.D., red.; RADCHENKO, B.P., red.; ROMANENKO, I.N., red.; RUBIN, S.S., red.; SAVCHENKO, M.Kh., red.; SOKOLOVSKIY, A.N., red.; TSYBENKO, K.Ye., red.; KOVAL'SKIY, V.F., tekhn.red.

[Practical collective farm encyclopedia] Kolkhoznaia proizvodstvennaia entsiklopediia. Izd. 2-oe, perer. i dop. Kiev, Gos. izd-vo sel'khoz. lit-ry USSR. Vol.2. Malina-Iashchur. 1957. 923 p.
(Agriculture--Dictionaries) (MIRA 11:4)

USSR / Soil Science. Mineral Fertilizers. J-4

Abs Jour: Ref Zhur-Biol., No 8, 1958, 34385.

Author : Vlasyuk, P. A., Lisoval, P. Z.
Inst : AS UkrSSR.
Title : Increase of Fertility of Soil and Yield in Agricultural Cultivations by Means of Utilizing Organic and Mineral Fertilizers.

Orig Pub: V sb.: Mestn. organ. udobreniya USSR, Kiyev, AN USSR, 1957, 5-17.

Abstract: Based on experiments conducted on turf-podzolic sandy loam and meadowy-black earth podzolized soils, the authors claim that application of the organic- mineral system of fertilization secures the most favorable condition for the nutrition of plants and considerably increases the yield. The highest increase in yield was observed by

Card 1/2

USSR / Soil Science. Mineral Fertilizers. J-4

Abs Jour: Ref Zhur-Biol., No 8, 1958, 34385.

Abstract: introduction of manure, mixed with P_2 and defec-
ation, The effectiveness of action of organic-
mineral mixtures increases by adding manganese
and lignite residues to it, and also by compost-
ing organic fertilizers with the mineral. --
L. N. Kudryashova.

Card 2/2

COUNTRY : USSR
CATEGORY : PLANT PHYSIOLOGY. Mineral Nutrition.

ABS. JOUR. : REF ZhUR - BIOLOGIYA, NO. 4, 1954. No. 15292

AUTHOR : Vlasyuk, P.A.
INST. : --
TITLE : Spectral Analytic Study of Selective Properties in Plants.

ORIG. PUB. : V sb.: Primeneniye metodov spektroskopii v prom-sti prodovol'stv. tovarov i s. kh., L., LGU, 1957, 51-59

ABSTRACT : Results are reported on a study by the emission-spectral method of the content of macro-, micro-, and ultramicroelements (34 elements in all) in various soils and plants cultivated in different zones of the USSR. Vegetable cultures selectively absorbed and accumulated (especially in the seed) a notable amount of microelements, although they were not successfully detected in the soils. Thus, cucumbers always contained Mg, Mo, Pb,

CARD: 1/2

2

COUNTRY
CATEGORY PLANT PHYSIOLOGY.

ABS. JOUR. REF ZHUR - BIOLOGIYA, NO. 4, 1959.

I

AUTHOR
INST.
TITLE

No. 15292

ORIG. PUB. :

ABSTRACT : Sn, V, and Cu; garlic - V; peppers - Mo, tomatoes - Zr; cabbages - I and Co; corn kernels - Au. The nature of the soil influenced the number of micro- and ultramicroelements in plants. -- N.I. Borisova

CARD: 2/2

COUNTRY : USSR
CATEGORY : Soil Science. Organic Fertilizers.

ABS. JOUR. : RZhBiol., No. 23 1958, No. 104483

AUTHOR : Vlasyuk, P. A.
INST. : Kharkov University
TITLE : Improving Plant Nutrient Conditions With Brown Coal Tailings

CITE. PUB. : V sb.: Guminovyye udobreniya. Khar'kov, Khar'kovsk. un-t, 1957, 127-144

ABSTRACT : In absorptive power, brown coal tailings surpass a number of investigated substances and are second only to peat; the greatest absorption of P was observed for coal tailings of Khustskoye and Yurkovskoye origin; of ammonium, for Yasenovskoye brown coal tailings. The use of brown coal tailings together with mineral fertilizers or manure increases the yield of sugar beet, winter wheat, oats, rye, flax, corn and other crops, and noticeably increases the number of nodules on pea. The composting of manure with brown coal tailings caused a 50% decrease in P loss and an increase in the content of an active form of N of up to 117 mg per 100 g of

Card: 1/2

COUNTRY :
CATEGORY : J

[illegible] : Khimiya, No. [illegible] 1962, No. 10[illegible]

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : soil as opposed to 78.8 mg without tailings; best results were obtained when composting manure with 10% brown coal tailings; an increase of the dose to 20% did not increase the effect. The addition of tailings to P_s when introducing it into the pits increased the cob harvest of corn from 112.8 to 146.5 centners/hectare; the addition of coal tailings to K for flax cultivation increased the fiber yield from 7.4 to 10.3 centners/hectare and, besides, raised the oil content in the seeds from 43.2 to 53.5%.--S. A. Kamizov

Card: 2/2

J-4

USSR / Soil Science. Mineral Fertilizers.

Abs Jour: Ref Zhur-Biol., No 8, 1958, 34409.

Author : Vlasyuk, P. A.
Inst : Not given.
Title : New Aspect of Fertilization - Manganized Superphosphate.

Orig Pub: Byul. po fiziol. rasteniy, 1957, No 1, 6-10.

Abstract: Manganized P_s is obtained by means of granulation of P_s in powder form with 10 - 15% of manganic slime and 1 - 4% chalk. The fertilizer contains 17.8 to 18.3% of assimilated phosphoric acid, 2-3% of manganese oxides, and its free acidity is 1.7 - 2.7 (instead of 5% in P_s). According to the results of the tests, carried out by experi-

Card 1/2

USSR / Soil Science. Mineral Fertilizers. J-4

Abs Jour: Ref Zhur-Biol., No 8, 1958, 34409.

Abstract: mental stations, as well as production experiments in collective farms of USSR, the efficiency of manganized P_s exceeds that of the common granulated P_s. -- T. L. Rivkind.

Card 2/2

33

USSR / Plant Physiology. Mineral Nutrition. I-3

Abs Jour: Ref Zhur-Biol., 1958, No 16, 72577.

Author : Vlasyuk, P. A.; Manorik, A. V.
Inst : Ukrainian Scientific-Research Institute of Plant Physiology.
Title : Admission of Radioactive P^{32}, S^{35} and C^{14} in Plants from the Organic and Mineral Forms of Their Compounds.

Orig Pub: Byul. po fiziol. rasteniy, 1957, No 1, 20-23.

Abstract: Winter wheat plants were fed with marked P_c in the phase of tubing; in 7 days they were unearthed and kept for two days in containers with water containing 2 mcuries of P^{32} in the form of $Na_2HP^{32}O_4$. The parts of the plants above ground were used as green fertilizer under buckwheat. Bogatyr' buck-

Card 1/3

USSR / Plant Physiology. Mineral Nutrition. I-3

Abs Jour: Ref Zhur-Biol., 1958, No 16, 72577.

Abstract: wheat was raised in soil cultures: P^{32} was introduced in the form of P_c, pure vegetative mass or infected with fresh manure. The accumulation of the raw mass and the weight of seed harvest were greatest in the case of application of mineral P, the least - in those fertilized only with vegetative residue. The admission of P^{32} with fertilization by vegetative mass without infection was more intensive than with it. During the cultivation of buckwheat on Knop's nutritive mixture, the rate was studied of the admission of S^{35} (in the form of vitamin B_1 and methionine), C^{14} (in the form of tyrosine and $Na_2C^{14}O_3$) and P^{32} ($Na_2HP^{32}O_4$). In the blossoming phase, a rapid admission of organic compounds was observed. Ten minutes after the appli-

Card 2/3

11

USSR / Plant Physiology. Mineral Nutrition. I-3

Abs Jour: Ref Zhur-Biol., 1958, No 16, 72577.

Abstract: cation of tyrosine in a nutritive solution, the radioactivity of the flowers was highest; in 20-60 minutes, the radioactivity of the leaves was increased, but that of the flowers decreased. In three hours after the application of radioactive substances on the leaves, significant activity of the roots was detected through which methionine moved more intensively than vitamin B_1, and the NO_2CO_3 moved more intensively than the tyrosine. The work was carried out in the Ukrainian Scientific-Research Institute of Plant Physiology. -- B. Ye. Kravtsova.

Card 3/3

COUNTRY : USSR
CATEGORY : N

ABS. JOUR. : RZBiol., No 12, 1958, No 53935

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : wheat and oat yields following this were not noted, and a certain yield boost was observed in the test with oats. --N.I. Borisova

CARD: 2/2

6

VLASYUK, P.; ZAKHARCHUK, P.; KALYUZHNYY, V.; PERESYPKIN, V.

Seventieth birthday of Mikhail Mikhailovich Godlin. Pochvovedenie no.3:117-118 Mr '57. (MLRA 10:7)
(Godlin, Mikhail Mikhailovich, 1886-)

I.

USSR/Plant Physiology - Mineral Nutrition.

Abs Jour : Ref Zhur - Biol., No 23, 1958, 104360

Author : Vlasyuk, P.A., Kosmatyy, Ye.S., and Klimovitskaya, [illegible]

Inst : Institute of Plant Physiology and Agrochemistry, AS Ukrainian SSR.

Title : The Effect of Nitrato-Ammoniacal, Nitrogenous and Manganous Nutrition on Sulfur Metabolism in the Sugar Beet.

Orig Pub : Fiziol. Rasteniy, 4, No 5, 432-439, 1957.

Abstract : Under conditions of a soil culture and a NPK background, with respect to the sugar beet and wheat, it was established through introducing $Na_2S^{35}O_4$ (50 curies per 16 kg of soil) that, in contrast with P, more S enters into reserve proteins than into the constitutional proteins. Injection into the roots of the sugar beet of aqueous solutions of methionine or vitamin b_1 containing S^{35} caused

Card 1/3

- 8 -

USSR/Plant Physiology - Mineral Nutrition. I.

Abs Jour : Ref Zhur - Biol., No 23, 1958, 104360

an intensive translocation of S into leaves, especially the younger leaves, in which connection a major part of S was also included in the reserve proteins. The rate of S metabolism (as determined according to its specific activity and the number of the individual forms of S) from methionine was higher than from vitamin B_1, especially with respect to the easily detached S fraction (by Shul'ts' method). A larger quantity of S entered into organic compounds than into mineral compounds. Compared with ammoniacal nutrition, the nitrate nutrition of the sugar beet favored an increase in the rate of S metabolism. Under the influence of In the rate of metabolism of the inorganic form of S changed little, while that of the organic and not easily detachable form of S decreased more so at nitrate nutrition than at ammoniacal nutrition. By means of the paper chromatography method it was established that the amino acid composition of the root

Card 2/3

J

USSR/Soil Science. Mineral Fertilizers

Abs Jour : Ref Zhur-Biol., No 13, 1958, 58337, By N.N. Sokolov

Author : Vlasyuk P. A., and Butkevich A. P.
Inst : All-Union Academy of Agricultural Sciences imeni V. I. Lenin
Title : Significance of Soil Microflora in the Manganese Nutrition of Plants

Orig Pub : Dokl. VASKhNIL, 1957, No 5, 3-9

Abstract : The Ukrainian Scientific-Research Institute of Plant Physiology conducted vegetation experiments by growing oats, sugar beet, and flax with and without rhizospheric microflora of these plants in sandy cultures with the following variants: a). without Mn, b) MnO_2, c) $MnSO_4$--1 norm; d).

Card 1/2

USSR/Soil Science. Mineral Fertilizers J

Abs Jour : Ref Zhur-Biol., No 13, 1958, 58337, By N. N. Sokolov

Abstract : $MnSO_4$--10 norms. Rhizospheric microflora removed the harmful effect of either the insufficiency or excess of Mn and contibuted to the mobility of Mn in the variant with MnO_2.

Editorial remark: $Fe(SO_4)_3$ and H_2BO_5 are mistakenly indicated as components of VNIS nutritive medium. They should read $Fe_2(SO_4)_3$ and H_3BO_3).

Card 2/2

USSR / Plant Physiology. Mineral Nutrition. I-3

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 43729

Author : Vlasyuk, P. A.; Kosmatyy, Ye. S.; Klimovitskaya, Z. M.
Inst : Kiev Institute of Plant Physiology, AS USSR
Title : The Effect of Nitrate, Phosphorus, Potassium and Manganese Nutrients on Phosphorus Metabolism in the Sugar Beet.

Orig Pub : Izv. AN SSSR, Ser. biol., 1957, No. 5, 611-616

Abstract : A vegetative experiment (repeated five times) with the use of P^{32}, made at the Kiev Institute of Plant Physiology, showed that in the sugar beet culture Mn both on a nitrate ground and a ground of ammonium nitrogen nutrient increased the speed of the metabolism of P with RNA and DNA, as well as the P fraction of "nucleic acids plus phosphoproteins". The P metabolism speed of phospholipids and mineral phosphates was reduced under the influence of Mn on an ammonium nutrient ground and increased on a nitrate one. The P metabolism rate at a low phosphorus nutrient level reached

Card 1/2

VLASYUK, P.A.

USSR / Cultivated Plants. Plants for Technical Use. Oil Plants. Sugar Plants. M

Abs Jour : Ref Zhur - Biol., No 8, 1958, No 34771

Authors : Vlasyuk, P. A.; Shmat'ko, I. G.
Inst : All-Union Scientific Research Institute for Sugar Beets
Title : Effects of Liquid Nitric Fertilizers on Seed Productivity.

Orig Pub : Sakharnaya svekla, 1957, No 6, 17-19

Abstract : Crop experiments conducted during the year 1956 by the All-Union Scientific Research Institute for Sugar Beets at the Kapitonovskiy sugar combine in the district of Cherkasskaya Oblast over an area of 18 hectares on medium-leached black earth ascertained the relative effects of liquid and solid nitric fertilizers, used on phosphate-potassic bases, on the productivity of sugar beet transplantation. To one hectare were added: potash salt (32% K_2O) 1 hwt; superphosphate 2.7 hwt; nitric acid of ammonia 1 hwt. All fer-

Card 1/2

USSR / Cultivated Plants. Plants for Technical Use. Oil Plants. Sugar Plants. M

Abs Jour : Ref Zhur - Biol., No 18, 1958, No 34771

tilizers were added as side-dressing . Liquid ammonia (82.3% N) was inserted into the soil by means of special machines to a depth of 12 cm. Liquid ammonia increased the soil acidity to a greater extent than nitric acid of ammonia. At the period of blooming, the intake of N into the balls and fruit stem leaves was most intensive under the action of the liquid ammonia; that of P, as a result of the added ammonium nitrate. The seed crop under the action of ammonia was by 1 to 2 hwgt per hectare larger than when using nitric acid ammonia. Thus, it could be concluded that liquid ammonia, when compared with all other nitric fertilizers, appears to be the best form of fertilization for the enriching of seed cultures of sugar beets. -- Smirnov.

Card 2/2

Country : USSR

Category : CULTIVATED PLANTS. POTATOES. Vegetables. Cucurbits.

Abs. Jour. : Ref Zhur-Biol., 21, 1958, No. 96004

Author : Vlasyuk, P.A., Derev'yanko, S.I.
Institut. : AS Ukrainian SSR
Title : The Effects of Different Forms of Potassium Fertilizers on the Physiologico-Biochemical Processes, Yield and Quality of Tomatoes and Potatoes Grown*
Orig. Pub. : Visnik AN URSR, 1957, No.9, 42-52

Abstract : In tests conducted with the mid-season maturing Krasnodarets variety tomato and Lorkh potato under irrigation, an investigation has been made of the activity of ferments and respiration, the accumulation of ascorbic acid, sugar and chlorophyll, the change in moisture, as well as the Cl, S and K contents. K_2 and potassium-magnesium increased the vitamin C and dry matter content in tomato fruits from 4.8-5.0 (in the control) to

* Under Irrigation

Card: 1/3

Country : M
Category : CULTIVATED PLANTS. POTATOES.
Abs. Jour. : REF ZHUR-BIOL.,21,1958,NO-96004
Author :
Institut. :
Title :

Orig. Pub. :

Abstract : 5.4-5.8. All forms of K reduced the acidity of the fruit and favorably affected the water balance in the plants. The synthesis of chlorophyll in the tomato leaves and potato leaves increased only with the application of potash-magnesium and K_0. The latter produced the optimum respiration rate in the potato leaves. Potassium fertilization did not show any effect on a number of biochemical processes. Tomato yield boosts of 28.9, 26.8, and 18.2 cwt/ha. were obtained over the 226.2 of the

Card: 2/3

USSR / General Biology. Physical and Chemical Biology. B

Abs Jour : Ref Zhur - Biol., No 19, 1958, No. 85491

Author : Vlasyuk, P. A.
Inst : All-Union Academy of Agricultural Services imeni V.I. Lenin.
Title : Basic Mechanisms of Biological Effects of Small Doses of Nuclear Irradiation.

Orig Pub : Dokl. VASKhNIL, 1957, No 10, 8-14

Abstract : A review of studies on the effects of irradiation with radioactive isotopes on different agricultural crops under conditions of vegetative and field experiments, conducted by the Institute of Plant Physiology of the Ukrainian Academy of Agricultural Sciences, beginning in 1950. With indicator doses of P^{32}, S^{35}, Ca^{45}, Zn^{65} and

Card 1/3

USSR / General Biology. Physical and Chemical Biology. B

Abs Jour : Ref Zhur - Biol., No 19, 1958, No 85491

Co^{60}, applied for pre-sowing treatment of seeds (by maceration in solutions of salts of these isotopes) or for extra root plant feeding at different stages, a considerable increase in productivity was attained in the great majority of the cases and in improvement in the quality of various crops (sugar beets, tomatoes, winter wheat, barley, rye, corn, clover, lupine, potatoes, grapes, tea, kok-saghyz). It was established in a number of experiments that even under unfavorable environmental conditions (lowered temperature, poor insulation) there is a positive effect of radioisotopes on plants. Investigations of the biological activity mechanism of ionizing radiations have shown that the responsive reaction of the living

Card 2/3

VLASYUK, P.A., akademik; DOBROTVORSKAYA, R.M., kandidat sel'skokhozyaystvennykh nauk; GORDIYENKO, S.A.

Intensity of ferment action in the rhizosphere of various agricultural plants. Dokl. Akad. sel'khoz. 22 no.3:14-19 '57. (MLRA 10:6)

1. Ukrainskiy nauchno-issledovatel'skiy institut fiziologii rasteniy.

(Rhizosphere microbiology) (Enzymes)

VLASYUK, P.A., akademik; BUTKEVICH, K.P.

Role of soil microflora in the manganese nutrition of plants.
Dokl.Akad.sel'khoz.27 no.5:3-9 '57. (MLRA 10:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut fiziologii rasteniy.
(Rhizosphere microbiology) (Manganese) (Plants--Nutrition)

Vlasyuk, P.A.

VLASYUK, P.A., akademik.

Principle consistent manifestations of the biological action of small doses of nuclear radiation. Dokl. Akad. sel'khoz. 22 no.10: 8-14 '57. (MIRA 10:12)

(Plants, Effect of radioactivity on)

VLASYUK, P.A.; DEREV'YANKO, S.I.

Effect of various potassium fertilizers on physiological and biochemical processes, yield and quality of tomatoes and potatoes in irrigation farming. Visnyk AN URSR 28 no.9:42-52 S '57. (MIRA 11:1)

(Fertilizers and manures) (Irrigation farming)

Country : USSR
Category : Plant Physiology. Mineral Nutrition.

Abs Jour. : Ref. Zhur.-Biologiya No. 11, 1958. No.48539

Author : Vlasyuk, P.A.; Porutskiy, G.V.; Cherednichenko,S.V
Institute : Acad. Sciences USSR
Title : Non-Root Side-Dressing with Thiamine and Plant Growth during Florescence

Orig. Pub.: Dokl. AN SSSR, 1957, 112, No. 4, 769-771

Abstract : Top-dressing corn with thiamine during the flowering period (in field experiments with both stable and radioactive preparates) stimulated the vertical growth of the stalks and intensified the growth of the reproductive organs during flowering, yielding a slight boost in the grain harvest. A direct correlation was noted between the plant and the activity of the volatile organic secretions of the plants, which was determined by

Card: 1/2

Country : USSR I
Category : Plant Physiology. Mineral Nutrition.

Abs. Jour.: Ref. Zhur.-Biologiya No. 11, 1958. No. 48539

Author :
Institute :
Title :

Orig. Pub.:

Abstract : measuring the geotropic flexure they had produced.
--N.I. Borisova

Card: 2/2

VLASYUK, P. A.

USSR/PlantPhysiology - General Problems. I.

Abs Jour : Ref Zhur - Biol., No 18, 1958, 81961

Author : Vlasyuk, P.A., Porutskiy, G.V., Cherednichenko, S.V., Dolgiy, S.N.

Inst : AS USSR

Title : The Influence of Extra-Root Fertilization on the Increase of Germination of the Seed Material.

Orig Pub : Dokl. AN USSR, 1957, 113, No 1, 214-216

Abstract : Extra root fertilization with solutions of common (0,005%) and radioactive (2.5 μ curie per plant) thiamine of P^{31} and P^{32} (10^{-4} μ curie on a plant) was carried out by spraying from an airplane or a tractor sprayer. The doses were calculated on the basis of 200-400 l/ha. These experiments took place in field and industrial tests during the blossoming of corn and winter wheat.

Card 1/2

USSR/Plant Physiology - General Problems. I.

Abs Jour : Ref Zhur - Biol., No 18, 1958, 81961

The dose of radioactive substances caused an increase in the energy of seed germination after the phase of wax ripeness. The reason for this increase is the earlier advent of physiological maturity as well as the shortening of the time of restoration of the changes in the bioelectrical potential (responding to a weak electrical stimulus), while conserving the capacity for synthesis of thiamine. These experiments were carried out at the Institute of Plant Physiology and Agricultural Chemistry at the AS UkrSSR. -- B.E. Kravtsova

Card 2/2

VLASYUK, Petr Antinovich [Vlasiuk, P.A.], akademik; SIROCHENKO, I.A., prof., red.; TUBOLEVA, M.V. [Tubolieva, M.V.], red.

[New microfertilizers] Novi mikrodobryva. Kyiv, 1958. 42 p. (Tovarystvo dlia poshyrennia politychnykh i naukovykh znan' Ukrains'koi RSR. Ser.3, no.8) (MIRA 12:3)
(Trace elements)

VLASYUK, P.A., akademik; ZEROV, D.K., akademik; PSHENICHNYY, P.D., akademik; ROMANENKO, I.N., akademik, otvetstvennyy red.; MOVCHAN, V.A.; RODIONOV, S.P.; TYULENEV, N.A.; DAVYDOV, G.M., kand. ekon. nauk; KUGUKALO, I.A., kand. ekon. nauk; BEREZIKOV, V.S.; FEDUN, A.D.; GRUDZINSKAYA, O.S., red. izd-va; YURCHISHIN, V.I., tekhn. red.

[Natural conditions and resources of the Polesye; transactions of the Conference on Problems of the Development of the Productive Forces of the Ukrainian Polesye] Prirodnye usloviia i resursy Poles'ia; trudy konferentsii po voprosam razvitiia proizvoditel'nykh sil Poles'ia USSR. Kiev. Pt.1. 1958. 123 p. (MIRA 11:7)

1. Akademiya nauk URSR, Kiev. Rada po vyvchenniu produktivnykh syl. 2. Akademiya nauk USSR (for Vlasyuk, Zerov). 3. Ukrainskaya akademiya sel'skokhozyaystvennykh nauk (for Vlasyuk, Pshenichnyy, Romanenko). 4. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I. Lenina (for Vlasyuk). 5. Chlen-korrespondent Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I. Lenina (for Romanenko). 6. Chlen-korrespondent akademii nauk USSR (for Movchan, Rodionov, Tyulenev). 7. Zamestitel' nachal'nika otdela svodnykh perspektivnykh planov Gosplana USSR (for Berezikov). 8. Nachal'nik podotdela sel'skogo khozyaystva otdela svodnykh perspektivnykh planov Gosplana USSR (Fedun).

(Polesye--Natural resources)

ROMANENKO, I.N., akademik, otvetstvennyy red.; VLASYUK, P.A., akademik, red.; ZEROV, D.K., akademik, red.; RODIONOV, S.P., red.; TYULENEV, N.A., red.; PSHENICHNYY, P.D., akademik, red.; DAVYDOV, G.M., kand. ekon. nauk,red.; KUGUKALO, I.A., kand. ekon. nauk, red.; BEREZIKOV, V.S., red.; FEDUN, A.D., red.; KOZAKEVICH, T.A., red. izd-va; SIVACHENKO, Ye. K., tekhn. red.

[Problems in the economy of Polesye; transactions of a conference] Voprosy ekonomiki Poles'ia; trudy konferentsii. Kiev, Izd-vo Akad. nauk USSR. Vol. 4. 1958. 134 p. (MIRA 11:10)

1. Konferentsiya po voprosam razvitiya proizvoditel'nykh sil Poles'ya USSR. 1955. 2. Akademiya nauk USSR (for Vlasyuk, Zerov,). 3. Ukrainskaya Akademiya sel'skokhozyaystvennykh nauk (for Vlasyuk, Romanenko, Pshenichnyy). 4. Vsesoyuznaya Akademiya sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Vlasyuk). 5. Chlen-korrespondent Vsesoyuznoy Akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Romanenko). 6. Chlen-korrespondent Akademii nauk USSR (for Rodionov, Tyulenev). 7. Zamestitel' nachal'nika otdela svodnykh perspektivnykh planov Gosplana Soveta Ministrov USSR (for Berezikov). 8. Nachal'nik podotdela sel'skogo khozyaystva i zagotovok otdela svodnykh perspektivnykh planov sel'skogo khozyaystva Gosplana Soveta Ministrov USSR (for Fedun).
(Polesye--Economic conditions)

VLASYUK, P.A., akademik, red.; ROMANENKO, I.N., akademik, red.; RODIONOV, S.P., red.; TYULENEV, red.; PSHENICHNYY, P.D., akademik, red.; DAVYDOV, kand.ekon.nauk, red.; KUGUKALO, I.A., kand.ekon.nauk; BEREZIKOV, V.S., red.; FEDIN, A.D., red.; KOZAKEVICH, T.A., red. izd-va; SIVACHENKO, Ye.K., tekhn.red.

[Proceedings of the Conference on Problems in Developing Production in Polesye] Konferentsiia po voprosam razvitiia proizvoditel'nykh sil Poles'ia USSR. Kiev, 1955. Pt.3 [Problems in the development of agriculture in Polesye; stockbreeding and feed supply, land improvement and reclamation of swamps] Voprosy razvitiia sel'skogo khoziaistva Poles'ia; zhivotnovodstvo i kormovaia baza, melioratsiia i osvoenie bolot. Kiev, Izd-vo Akad. nauk USSR. 1958. 208 p. (MIRA 12:1)

1. AN USSR; Ukrainskaya akademiya sel'skokhoz.nauk i Vsesoyuznaya akademiya sel'skokhoz.nauk im. V.I. Lenina (for Vlasyuk). 2. Ukrainskaya akademiya sel'skokhoz.nauk, chlen-korrespondent Vsesoyuznoy akademii sel'skokhoz. nauk im. V.I. Lenina (for Romanenko). 3.Chlen-korrespondent AN USSR (for Rodionov, Tyulenev). 4. Institut fiziologii rasteniy i agrokhimii AN USSR (for Tyulenev). 5. Ukrainskaya akademiya sel'skokh. nauk (for Pshenichnyy). 6. Zamestitel' nachal'nika otdela svodnykh perspektivnykh planov Gosplana USSR (for Berezikov). 7. Nachal'nik podotdela sel'skogo khozyaystva otdela svodnykh perspektivnykh planov Gosplana USSR (for Fedin).
(Polesye--Agriculture)

VLASYUK, P. A.

3(7) PHASE I BOOK EXPLOITATION SOV/2334

Konferentsiya po agrometeorologii i agroklimatologii Ukrainskoy SSR

Materialy konferentsii (Material of the Conference on Agricultural Meteorology and Climatology of the Ukrainian SSR) Leningrad, Gidrometeoizdat, 1958. 247 p. Errata slip inserted. 700 copies printed.

Sponsoring Agencies: USSR. Glavnoye upravleniy gidrometeorologicheskoy sluzhby, Ukrainian SSR. Ministerstvo sel'skogo khozyaystva, Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut, and Ukrainskaya akademiya sel'skokhozyaystvennykh nauk.

Resp. Ed.: O.P. Prikhot'ko; Ed.: V.D. Pisarevskaya; Tech. Ed.: M.I. Braynina.

PURPOSE: This book is intended for agriculturists, agrometeorologists, and instructors in related fields.

COVERAGE: This collection of articles deals with problems in agricultural meteorology in the Ukraine. Among the topics discussed are: wintering, planting time for winter crops, corn cultivation, potato degeneration, moisture supply, and adverse weather factors. References accompany individual articles.

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3(7) PHASE I BOOK EXPLOITATION SOV/2384

Konferentsiya po agrometeorologii i klimatologii Ukrainskoy SSR

Materialy konferentsii (Material of the Conference on Agricultural Meteorology and Climatology of the Ukrainian SSR) Leningrad, Gidrometeoizdat, 1958. 247 p. Errata slip inserted. 700 copies printed.

Sponsoring Agencies: USSR. Glavnoye upravleniye gidrometeorologicheskoy sluzhby, Ukrainian SSR. Ministerstvo sel'skogo khozyaystva, Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut, and Ukrainskaya akademiya sel'skokhozyaystvennykh nauk.

Resp. Ed.: G.F. Prikhot'ko; Ed.: V.D. Pisarevskaya; Tech. Ed.: M.I. Braynina.

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COVERAGE: This collection of articles deals with problems in agricultural meteorology in the Ukraine. Among the topics discussed are: wintering, planting time for winter crops, corn cultivation, potato degeneration, moisture supply, and adverse weather factors. References accompany individual articles.

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USSR/Soil Science. Organic Fertilizers J-6

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 91486

Author : Vlasyuk P.A., Dorienko M.S., Manorik A.V.
Inst
Title : The Effectiveness of the Use of Industrial Brown Coal Waste for Various Agricultural Crops

Orig Pub : Byul. po fiziol. rastenii, 1958, No 2, 48-52

Abstract : No abstract

END

Card : 1/1

VLASYUK, P.A.; LENDENSKAYA, L.D.

Polar distribution of manganese in different parts of organs of wheat and corn plants [with summary in English]. Fiziol.rast. 5 no.6: 488-493 N-D '58. (MIRA 11:12)

1. Institut fiziologii rasteniy Ukrainskoy SSR, Kiyev.
(Polarity (Biology)) (Plants, Effect of manganese on)
(Plants, Motion of fluids in)

VLASYUK, P.A., akademik; GURIL'OVA, M.A. [Huryl'ova, M.A.], kand.biol. nauk

Winter hardiness of plants. Nauka i zhyttia 8 no.3:23-25 Mr '58. (MIRA 12:9)

1. AN USSR i Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk im. Lenina (for Vlasyuk).
(Plants--Frost resistance)

SOV-21-58-8-22/27

AUTHORS: Vlasyuk, P.A., Member of the AS UkrSSR, and Lisoval, P.Z.

TITLE: Effect of Various Forms of Potassium Fertilizers on the Yield of Farm Crops (Vliyaniye razlichnykh form kaliynykh udobreniy na urozhay sel'skokhozyaystvennykh kul'tur)

PERIODICAL: Dopovidi Akademii nauk Ukrains'koi RSR, 1958, Nr 8, pp 887-890 (USSR)

ABSTRACT: With the aim of establishing the best conditions of nutrition and in raising the yield of plants, the authors studied various forms of potassium fertilizers from deposits of the western regions of the Ukrainian SSR on permanent fields of the Ukrainian Research Institute for Plant Physiology and temporary fields at the Irpen' river and at the Kherson research station. As a result of many years of research, they arrived at the conclusion that to obtain high yields and a better quality of farm produce, both for grain and technical as well as for vegetable and fodder crops, it is essential to utilize not only chloride but sulfate and sulfate-magnesian forms of potassium fertilizers and their combinations.
There are 6 Soviet references.

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